

Reminder of important clinical lesson

Silent uterine perforation by an IUCD inserted during the puerperium

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Summary

A 38-year-old lady, with a history of recent caesarean section, was diagnosed with a silent uterine perforation by a copper intrauterine contraceptive device under fluoroscopic examination. The incidence of uterine perforation and the increased risk in the puerperium are discussed. The use of ultrasound as the first line investigation is recommended.

BACKGROUND

Uterine perforation by intrauterine contraceptive device (IUCD) is rare, but slightly more common in the puerperium. This case highlights the need of primary care practitioners to be aware of the higher risk of uterine perforation during the puerperium, and the need to be more stringent and careful during IUCD insertion in this period. This case should also serve as a reminder that ultrasound (US) is the investigation of choice in all patients with 'missing strings'.

CASE PRESENTATION

A 38-year-old, gravida 2, para 2 woman with no significant medical history was referred by her general practitioner (GP) for removal of an IUCD under fluoroscopic guidance.

The IUCD (Nova T380 Copper-based) had been sited by the GP 12 weeks post an uncomplicated elective caesarean section, and the insertion procedure had been documented as unremarkable, and the patient comfortable. At a 1 month check up by the practice nurse the IUCD strings were reported as 'difficult to see', and were presumed as being short. No follow-up was arranged at this time.

Ten months later, at a routine cervical smear test, the strings were reported as lost, and elective coil retrieval by the GP was attempted 2 weeks later. The GP was unable to remove the IUCD and referred the woman for IUCD removal under image guidance at our department as a 'failed' IUCD removal.

A retrospective history was obtained and the patient reported no adverse symptoms, specifically no pain either

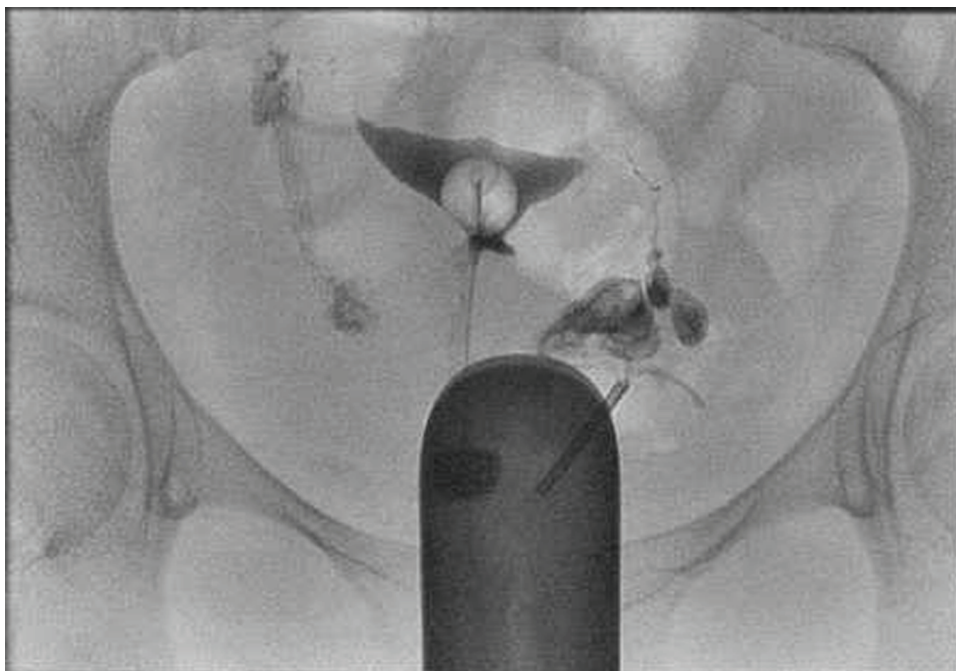


Figure 1 Hysterosalpingogram demonstrating normal reproductive anatomy and an ectopic IUCD.

at the time of coil insertion or in the 17 month since. She had not become pregnant during this time.

INVESTIGATIONS

Routine elective IUCD removal was arranged to take place in the interventional radiology suite 2 months later, without prior US for localisation, as this was local routine practice for failed IUCD removals. However, initial fluoroscopic screening revealed a normal appearing IUCD in a slightly low pelvic position. The strings were confirmed as missing on direct inspection of the cervical os. A lateral view was taken, with a uterine sound within the endocervical canal, which confirmed ectopic position of the IUCD posterolateral to the cervix (figure 1).

Intrauterine contrast injection demonstrated a normal uterine cavity and bilateral patent fallopian tubes and free spillage of contrast from the fimbrial ends. The coil could be seen to lie posteriorly and to the left of the cervix. No evidence of contrast leak was identified.

TREATMENT

Laparoscopic removal.

OUTCOME AND FOLLOW-UP

The diagnosis of silent uterine perforation was made based on the history and imaging, and the patient was referred to the gynaecologists for IUCD removal at laparoscopy.

DISCUSSION

Uterine perforation is a rare, but serious complication of IUCD insertion, and is often silent.¹ The incidence rate is reported between 1.6 and 2.2 in 1000.^{2 3} Aberrant IUCDs can be identified using most imaging modalities, with US being the recommended first line investigation,⁴ in all women in whom the 'strings' cannot be visualised, followed by orthogonal plain film views as second line.⁵ CT can be used in complex cases where visceral involvement or surgical difficulty is suspected.⁶ In this case, US was not performed, and resulted in delay to removal and increased risk of possible unwanted pregnancy.

In the puerperium the incidence of uterine perforation by IUCD is higher,⁷ and insertion of an IUCD is not recommended in women with a hyperinvoluted small uterus.⁸ The uterus during lactation is softer and can be atrophic,⁹ and hyperinvolution of the uterus is associated with lengthy amenorrhoea postpartum during lactation.¹⁰ Research suggests that postpartum and lactating women require less force when inserting an IUCD,¹¹ thus creating a higher incidence of perforation at insertion if normal force is used. One study suggests that it is safer to delay IUCD insertion until 6 months postpartum.³

While IUCDs remain a safe and well-tolerated method of contraception, practitioners inserting IUCDs should be

aware of the slight increased risk of uterine perforation during the puerperium due to atrophy associated with lactation, and hyperinvolution of the uterus associated with prolonged amenorrhoea.

Lack of visualisation of strings at follow-up examination of any woman with an IUCD should raise the possibility of silent uterine perforation, especially in breastfeeding women, and should prompt further investigation. A pelvic US should always be performed in the first instance for all cases of 'missing strings'.

Learning points

- ▶ US should be the first line investigation in all women with 'missing strings'.
- ▶ Perforation should be considered in all cases of 'missing strings'.
- ▶ There is an increased risk of IUCD perforation during the puerperium.
- ▶ The uterus undergoes physiological changes in the puerperium, leading to atrophy.
- ▶ Careful IUCD insertion technique should be always be used, especially in the puerperium.

Competing interests None.

Patient consent Obtained.

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